

REMARKS

Claims 1-45 are pending in the present application. Reconsideration of the claims is respectfully requested.

I. 35 U.S.C. § 112

Claims 12, 15 and 32 were rejected under 35 U.S.C. 112 as being indefinite. Claims 12 and 15 included the phrase to "maintain the aesthetic quality of the text input" as a relative term which renders the claim indefinite. The Examiner made a similar objection to the term "to improve publishing economies of scale while minimizing degradation to text readability. Accordingly, the claims have been amended to overcome these objections.

II. 35 U.S.C. § 103(a)

Claims 1-29, 33-36, 40 and 41 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Walker, USPN 6,279,017 filed 2/2/98. Claims 42-45 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Walker in view of Truelson, USPN 6,223,191 filed (2/12/1998).

The amended independent claims are divided into three groups. Claims 1, 11, 14, 19 and 33 include amendments essentially to either the "determining" or "formatting" steps of claim 1. Claims 29 and 42 assign values to "every word space". Independent claims 43-45 include similar limitations directed to assigning values to all between word spaces. Claim 30 as amended describes a neural network implementation. Neither Walker nor Walker in view of Truelson teach nor suggest the invention as claimed and the rejection is respectfully traversed.

Group I: Claim 1 amendments

Claim 1 as amended recites "key words and punctuation definitions that identify the beginning or end of a phrase" (p. 6, l. 20-22; p. 7, l. 1-2) and "controlling the space size of every between word space" (p. 6, l. 36 to p. 7 l. 8 and p. 7, l. 28-29). Walker uses "folding rules" to determine the best breakpoint that lies in a min/max line length window, breaks the text into two segments and places each on a new line. Walker does not control every between word space.

Claim 11 as amended recites "and phrases determined for a plurality of said lines" (p.6, l. 23-26) and "controlling the space size between words within each line according to the phrases determined over the plurality of lines" (p. 7, l. 28-29). Walker recursively processes the remaining segment breaking it into two segments until the last segment does not exceed the minimum line length. Walker does not consider phrases determined over multiple lines to control the between word spacing in each line.

Claim 14 as amended recites "using said key words and punctuation definitions to determine characteristics that predict boundary punctuation" (p. 5, l. 18-22) and "using said key words and said determined characteristics to predict phrase boundaries within said first plurality of words" (p. 5, l. 18-22). Walker uses the folding rules to determine the best breakpoint in the window. Walker does not use key words and punctuation definitions to first determine characteristics that predict boundary punctuation and then apply the key words and characteristics to a specific plurality of words to predict phrase boundaries.

Claim 19 as amended recites "identifying each word of said plurality as one of the key words in the library or a

non-key word" (p. 4, l. 32-34, p. 5, l. 17-21, p. 6, l. 34-36), "extracting a pattern from said plurality of the key and non-key words" (p. 5, l. 21-22 & 30-32), and "using said pattern to determine whether said first plurality of words includes a phrase boundary" (p. 6, l. 9-11 & 20-22). Walker takes each word and uses the reader specified word sets and external sources to assign it a number of attribute including classifying the part of speech, noun, verb, etc and then applies the folding rules to determine the breakpoint. Walker does not identify each of selected plurality as being a key or non-key word with respect to the library, and further does not then extract a pattern of key and non-key words that is used to determine phrase boundaries.

Claim 33 as amended recited "providing text input having certain aesthetic characteristics selected from at least one of justification, margins and lines per page" (p. 7, l. 18-20) and "formatting said text input according to said determined phrases to improve readability and maintain said certain aesthetic characteristics" (p. 8, l. 1-4 and 10-14). Walker intentionally breaks and violates these aesthetic characteristics of the text input to conform to his new structure.

Accordingly, Walker does not teach nor suggest the claimed features, and thus the rejection is respectively traversed.

Group II: Assigning values to "every word space"

Claim 29 as amended recites "assigning values to every space between each" (p. 6, l. 20-22, p. 7, l. 1-2) and "controlling the space size of every between word space on each line (p. 7, l. 28-29).

Claim 42 as amended recites "assigning... values to the spaces words", "repeating step d until all the text input has been analyzed and values assigned to all of the spaces between words", and "formatting said text input according to the assigned values" (p. 7, l 1-2 & 28-29). Claims 43-45 also include limitations directed as assigning values to all of the between word spaces.

Truelson teaches a method for 'letterspacing' to guarantee equal length of lines while minimizing hyphens and changes in between-letter kerning. Truelson's goal is orthogonal to Walker's insertion of linebreaks to conform to his new structure, and does not relate in any way to Applicant's claimed method of assigning values to between word spaces based on the likelihood the word is the beginning or end of a phrase.

Walker in view of Truelson does not teach nor suggest the claimed features, and thus is respectfully traversed.

Group III: Neural Network Implementation

Claim 30 as amended includes "a parser for parsing text input into sections containing within-sentence boundaries, said sections being represented as input patterns of key and non-key words" (p. 5, l 17-18, p. 5, l 28 through p. 6, l 6) and "a neural net readability engine trained on sections of training text less punctuation that cross sentence boundaries and represented as test patterns of key and non-key words to predict boundary punctuation at the end of sentences, said neural net processing the input patterns to assign a value to a predicted phrase boundary within sentences" (p. 5, l 81-19, p. 6, l 7-26, p. 7, l 1-8). Walker's process of user-adjusted folding rules and trial and error is not similar in any way to using a neural

network to determine phrasing, and specifically does not teach the implementation of a neural network for formatting text described in claim 30 as amended. A neural net operates and trains itself on potentially millions of trials, following predefined general principles of training and operation: Walker's 'user adjustment' is unprincipled, and based on the user's intuition and knowledge of the language as well as individual preferences for specific folding points.

Walker does not teach nor suggest the claimed features.

III. Allowable Subject Matter

Claims 37, 38 and 39 were objected to as being dependent upon a rejected base claim but as being allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims.

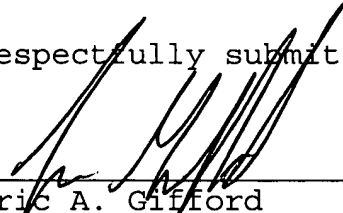
According, claim 37 has been rewritten in independent form to include all limitations of base claim 1.

Conclusion

It is respectfully urged that the subject application is patentable over the cited references and is now in condition for allowance.

The Examiner is invited to call the undersigned at the below listed telephone number if, in the opinion of the Examiner, such a telephone conference would expedite or aid the prosecution and examination of this application.

Respectfully submitted,


Eric A. Gifford
Reg. No. 33,501
520 760-1754 Phone

Date: 8/15, 2004

ATTORNEY FOR APPLICANTS